UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/824,527	04/02/2001	Kirk Johnson	2762.2006-002	1065

			EXAMINER
21005	7590	02/01/2005	AVELLINO, JOSEPH E

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ART UNIT	PAPER NUMBER
2143	

DATE MAILED: 02/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

		Application No.	Applicant(s)
Office Action Summary		09/824,527	JOHNSON, KIRK
		Examiner	Art Unit	
		Joseph E. Avellino	2143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _20 December 2004_.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-52, 55 and 58_ is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-52, 55, 58,_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1-52, 55, and 58 are pending; claims 1, 19, 35, 40, 45, 47, 52, 55, and 58

are independent.

Claim Rejections - 35 USC § 102

2.   The text of those sections of Title 35, U.S. Code not included in this action can

be found in a prior Office action.

        Claims 1, 11-13, 16, 18, 19, 28-30, 33, 35, 38, 40, 43, 45, 47, 50, 52, 55, and 58

are rejected under 35 U.S.C. 102(e) as being anticipated by Primak et al. (Pub. No.

2001/0039585) (hereinafter Primak).

3.   Referring to claim 1, Primak discloses a system for optimizing server selection for

clients from among a plurality of servers in a packet communication network (Figure 1;

abstract), the system comprising:

        a plurality of servers for alternatively responding to client requests (Figure 1,

reference characters 30a-e);

        a central server (DNS server) that maintains server selection weights (i.e.

connection capacity and connection quality), and, based on the weights, provides a

candidate server list (i.e. listing of servers which exceed multiple threshold values for

metrics) for responding to a client request, the central server receiving feedback (i.e.

measurement statistics) indicating service by individual servers in response to client

requests and modifying the server selection weights based on the feedback (Figure 1; abstract; p. 2, ¶ 25; p. 3, ¶ 31).

4.   Referring to claim 11, Primak discloses each candidate server in the candidate server list is unique from each other candidate server in the list (i.e. there are no duplicate servers returned to the client, merely only ones which are above threshold) (Figure 1; p. 2, ¶ 23; p. 3, ¶ 31).

5.   Referring to claim 12, Primak discloses the feedback occurs at a requested event (i.e. when requested to by the DNS server) (p. 3, ¶ 27-29).

6.   Referring to claim 13, Primak discloses the weights are based on a bias factors to reduce convergence time, the bias factors including geographical location (Primak discloses returning the server with the shortest RTT, or round trip time, the server geographically closest to the client will have the higher RTT, and thereby be biased towards that particular server in the weighting of the servers) (p. 2, ¶ 29).

7.   Referring to claim 16, Primak discloses the central server includes multiple central servers organized as a distributed system (p. 2, ¶ 25).

8.   Referring to claim 18, Primak discloses the candidates represented in the candidate server list are pseudo-randomly selected based on the weights (they are

based on feedback received from the servers, which factor upon the current loads of the

servers, thereby providing a randomness to the selection factor, there is no actual

scheme, such as round-robin, to select the next server, thereby it is considered a

pseudo-random selection) (e.g. abstract).

9.   Claims 19, 28-30, 33, 35, 38, 40, 43, 45, 47, 50, 52, 55, and 58 are rejected for

similar reasons as stated above. Furthermore Primak discloses maintaining the count

of clients the server is providing service and transmitting that information to the central

server (p. 1-2 ¶ 11).

Claim Rejections - 35 USC § 103

10.   The text of those sections of Title 35, U.S. Code not included in this action can

be found in a prior Office action.

        Claims 2-7, 20-24, 32, 36, 39, 41, 44, 46, 48, and 51, are rejected under 35

U.S.C. 103(a) as being unpatentable over Primak.

11.   Referring to claim 2, Primak discloses the invention substantively as described in

claim 1. Furthermore, Primak discloses comprising a DNS server 10 which receives the

client request from the client (p. 2, ¶ 25); and based on the client requests, forwards the

client requests to the central server (since the central server is part of the DNS server, it

inherently forwards this request to the server when a resolution is to be made based on

the server cluster. Primak does not disclose the DNS server is separate from the

central server. However it is well known that constructing a formerly integral structure in

various elements only requires routine skill in the art (See Nerwin v. Erlichman 168

USPQ 177 (1969)). By this rationale it would have been obvious to one of ordinary skill

in the art to separate the functionality of the DNS server and the central server into

multiple segments to lessen the operational overhead towards the DNS server, thereby

providing faster throughput and better overall customer performance.

12.   Referring to claim 3, Primak discloses the invention substantively as described in

claim 2. Primak further discloses interrogating candidate servers in the candidate

server list (p. 2, ¶ 25).

13.   Referring to claim 4, Primak discloses the invention substantively as described in

claim 3. Primak further discloses selecting a candidate server based on the

interrogation (p. 3, ¶ 31).

14.   Referring to claim 5, Primak discloses the invention substantively as described in

claim 4. Primak further discloses indicating to the selected candidate server that it has

been selected to provide service to the requesting client (it is inherent that when the

client sends its request to the selected candidate server via a redirection packet, the

server will know that it has been selected to provide service to the requesting client,

since the only way for the client to be serviced by the particular server in the cluster is to request the address from the DNS server) (p. 3, ¶ 31).

15.   Referring to claim 6, Primak discloses the invention substantively as described in claim 3. Primak further discloses the DNS server returns to the requesting client the address of the first server to respond to the interrogation (Primak uses this term as the "shortest RTT" or Round Trip Time; since all interrogation requests are sent virtually simultaneously, it would be deduced that the server with the lowest RTT would be the first server to respond to the interrogation) (p. 3, ¶ 29).

16.   Claim 7 is rejected for similar reasons as stated above.

17.   Referring to claim 15, Primak discloses the invention substantively as described in claim 1. Primak does not disclose the central server includes vectors of server selection weights for subsets of clients. However, it is common knowledge that a DNS server caches certain aspects of a client's session with a server (i.e. maintains state information and would be able to redirect to an appropriate server if the client has an affinity towards that particular machine, either geographical or security). Taken in context with the invention disclosed in Primak, it would have been obvious to one of ordinary skill in the art to include caching weights of servers for particular clients for faster redirection and less transactional overhead.

18.   Claims 20-24, 32, 36, 39, 41, 44, 46, 48, and 51, are rejected for similar reasons

as stated above.

        Claims 17, and 34, are rejected under 35 U.S.C. 103(a) as being unpatentable

over Primak in view of Meek et al. (USPN 6,539,426) (hereinafter Meek).

19.   Referring to claim 17, Primak discloses the invention substantively as described

in claim 1. Primak does not disclose the client interrogates the candidate servers in the

list to measure network performance. Meek discloses another load balancing method

wherein client interrogates the candidate servers in the list to measure network

performance (col. 10, lines 6-27). It would be obvious to a person of ordinary skill in the

art at the time the invention was made to combine the teaching of Meek with Primak to

adequately provide business applications programs that are distributed amongst the

servers in the network providing redundancy and increased application usage as

supported by Meek (col. 1, lines 45-50).

20.   Claim 34 is rejected for similar reasons as stated above.

        Claims 8-10, 25-27, 37, 42, and 49, are rejected under 35 U.S.C. 103(a) as being

unpatentable over Primak in view of Guenthner et al. (USPN 6,134,588) (hereinafter

Guenthner).

21.   Referring to claim 8, Primak discloses the invention substantively as described in claim 1. Primak does not disclose the candidate server list includes extra, randomly selected, candidate servers beyond the candidate servers selected based on the weights. In analogous art, Guenthner discloses another server load balancing method wherein the candidate server list includes extra, randomly selected, candidate servers beyond the candidate servers selected based on the weights (e.g. abstract; Figure 8; col. 8, lines 25-50). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Guenthner with Primak to provide a client-side solution to ensure availability of Web services to a Web browser as supported by Guenthner (col. 1, lines 65-67).

22.   Referring to claims 9 and 10, Primak discloses the invention substantively as described in claim 1. Primak does not disclose the randomly selected candidate servers are a fixed number/percentage (a percentage is a number) beyond the number of servers selected based on the weights. Guenthner discloses including randomly selected servers based on the weighting (e.g. abstract; Figure 8; col. 8, lines 25-50). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Guenthner with Primak to provide a client-side solution to ensure availability of Web services to a Web browser as supported by Guenthner (col. 1, lines 65-67).

23.   Claims 25-27, 37, 42, and 49, are rejected for similar reasons as stated above.

Response to Amendment

24.   The Office acknowledges the amendments to claims 14, and 31 to overcome

rejections under 35 USC 112, second paragraph. Accordingly, the rejections to this

statute are withdrawn.

Response to Arguments

25.   Applicant's arguments filed December 20, 2004 have been fully considered but

they are not persuasive.

26.   Applicant argues, in substance, that (1) Primak discloses a candidate server list

of exactly one from the DNS proxy to the client and does not disclose a candidate

server list of at least two servers, and (2) the "count" of Primak is not applicable to the

"count" as stated in the independent claims since the higher the count in Primak, the

lower the likelihood the server will be chosen, as opposed to the invention the higher the

count the higher the probability corresponding to the candidate server.

27.   As to point (1), in response to applicant's argument that the references fail to

show certain features of applicant's invention, it is noted that the features upon which

applicant relies (i.e., sending a candidate server list of at least two candidate servers to

the client) are not recited in the rejected claim(s). Although the claims are interpreted in

light of the specification, limitations from the specification are not read into the claims.

See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The claimed

feature is providing a candidate server list of at least two candidate servers *for*

responding to a client request. The candidate server list is never sent to the client. In

fact, claims 2 and 3, the candidate server list is sent to the DNS which decides on which

server to forward the request to based on the candidate server list and sends its

address to the client. See claim 5. If applicant wishes to have this claim treated as

argued (i.e. the candidate of 2+ servers is sent to the client), Applicant is invited to

amend the independent claims to incorporate this limitation, however it is believed that a

rejection under 35 USC 112, first paragraph will be forthcoming since this feature is not

enabled in the disclosure.

28.   As to point (2), in response to applicant's argument that the references fail to

show certain features of applicant's invention, it is noted that the feature upon which

applicant relies (i.e., the higher the count, the higher the likelihood of selection) is not

recited in the rejected claim(s). Although the claims are interpreted in light of the

specification, limitations from the specification are not read into the claims. See *In re

Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The Office will interpret

the claims as broadly as possible from the scope of the claim. Since the claim does not

teach that the selection is determined from the candidate server list, merely "maintaining

a count of the number of clients" (claim 52), the rejection is maintained.

Conclusion

29.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

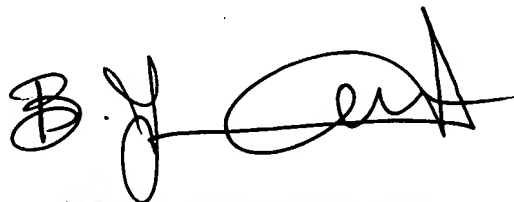than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Joseph E. Avellino whose telephone number is (571)

272-3905. The examiner can normally be reached on Monday-Friday 7:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, David A. Wiley can be reached on (571) 272-3923. The fax phone number

for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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Business Center (EBC) at 866-217-9197 (toll-free).

JEA
January 28, 2005

BUNJOB JAROENCHONWANIT
PRIMARY EXAMINER